

**REMARKS**

**The Section 112 Rejections**

Claims 1-15 were rejected under 35 U.S.C. §112, first paragraph, the Examiner stating that the term “non-amplified” optical signals in claims 1 and 11 are not supported by the original disclosure. Applicants respectfully disagree and traverse these rejections for at least the following reasons.

The present specification makes numerous references to ultra-long range (ULR) optical fiber networks. Such networks are distinguished by the ability to transmit optical signals over extremely long distances. Because of this fact (and others) it is not always necessary to amplify an optical signal before it is input into, or output from, the claimed connection devices of the present invention.

The specification indicates that the advantages offered by ULR networks have not been realized because existing cross-connection equipment has not evolved to take these advantages into consideration. For example, existing electronic cross-connections still require that an individual processing unit, such as an optical-to-electrical-to-optical regenerator, be dedicated to each wavelength within a link. This is a potential waste of resources because the ULR link may not need to be processed at all at any given node (see page 2, paragraph 0005 of the specification).

Said another way, an optical signal level within a ULR may be sufficient and not need amplification when it is received by an optical switch or processing unit of the present invention.

Accordingly, Applicants respectfully submit that the specification provides adequate support for the addition of the terms “non-amplified” optical signals in claims 1 and 11.

Accordingly, Applicants respectfully request withdrawal of the pending rejections and allowance of claims 1-15.

**The Section 102 Rejections**

Claims 1, 4-6, 9-11, 14 and 15 were rejected under 35 U.S.C. §102(e) as being anticipated by Fee et al., U.S. Patent No. 5,726,788 (“Fee”). For at least the following reasons, Applicants believe the Examiner is incorrect and traverse these rejections.

Independent claims 1, 6 and 11 include, among other things, an optical switch which is adapted to connect at least one processing unit to one or more, non-amplified optical signals based on a characteristic of each signal. It is not necessary for the claimed inventions to receive an amplified signal.

In contrast, Fee requires the reception of an amplified optical signal (see Figures 3 and 7; and at least column 4, lines 30-40).

Accordingly, Fee does not disclose each and every feature of the claimed invention and cannot therefore anticipate the claims of the present invention.

Applicants respectfully requests withdrawal of the pending rejections and allowance of claims 1, 4-6, 9-11, 14 and 15.

**The Section 103 Rejections**

Claims 2, 7 and 12 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fee in further view of Wong et al., U.S. Patent No. 6,624,927 ("Wong"). For at least the following reasons, Applicants disagree and traverse this rejection.

It is respectfully submitted that these claims are patentable over the combination of Fee and Wong for the reasons set forth with respect to independent claims 1, 6 and 11, from which these claims depend.

Claims 3, 8 and 13 were rejected under 35 U.S.C. §103(a) as being unpatentable over Fee in further view of Sharma et al., U.S. Patent No. 6,331,906 ("Sharma"). Applicants respectfully disagree and traverse this rejection for at least the following reasons.

Claims 3, 8 and 13 are at least patentable over the combination of Fee and Sharma for the reasons set forth with respect to independent claims 1, 6 and 11, respectively.

In addition, it is respectfully submitted that one of ordinary skill in the art would not be motivated to combine Fee with Sharma because to do so would render either Fee, Sharma, or both unsatisfactory for their intended purposes. Fee explicitly states that there is no conversion of an optical signal to an electrical signal and back to an optical signal (see Abstract, lines 6 and

7). In other words, Fee explicitly disavows the use of an optical-to-electrical-to-optical (OEO) converter, which is required by claims 3, 8 and 13. Of the modules 302 shown in Fee that can be connected with optical switch backplane 308, none are an OEO because there is no such conversion of an optical-to-electrical-to-optical signal. It is respectfully submitted that one of ordinary skill in the art would not combine the disclosures of Fee and Sharma because to do so would render Fee inoperable for its intended purpose (i.e., Fee would have to be modified to add an OEO converter, thus destroying Fee's intended purpose of not requiring an OEO).

Accordingly, Applicants respectfully request withdrawal of the pending rejections and allowance of claims 3, 8 and 13.

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact John E. Curtin at the telephone number of the undersigned below.

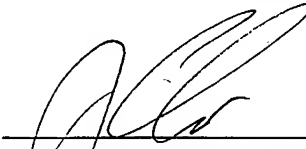
In the event this Response does not place the present application in condition for allowance, applicant requests the Examiner to contact the undersigned at (703) 668-8000 to schedule a personal interview.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17; particularly, extension of time fees.

Respectfully submitted,

HARNESS, DICKEY, & PIERCE, P.L.C.

By



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